

# Sertifikaat

PATENTKANTOOR

REPUBLIC OF SOUTH AFRICA

DEPARTEMENT VAN HANDEL  
EN NYWERHEID



Rec'd PCT/PTO 03 30 NOV 2003  
**Certificate**

PATENT OFFICE

REPUBLIEK VAN SUID-AFRIKA

DEPARTMENT OF TRADE AND  
INDUSTRY

Hiermee word gesertifiseer dat  
This is to certify that

REC'D 23 JUL 2003

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the documents annexed hereto are true copies of:

Application form P.1, provisional specification and drawings of South African Patent Application No. 2002/4368 as originally filed in the Republic of South Africa on 31 May 2002 in the name of JOYNT, Vernon Peregrin for an invention entitled: "ITEM OF FOOTWEAR";

AND it is further certified that Patent Application No. 2002/4368 and the invention forming the subject matter of the patent application, together with all priority rights flowing from the patent application under the provisions of the International Convention were duly assigned in accordance with law from JOYNT, Vernon Peregrin to CSIR by virtue of a Deed of Assignment which was duly registered at the Patent Office, Pretoria, on 5 December 2002.

Geteken te  
Signed at

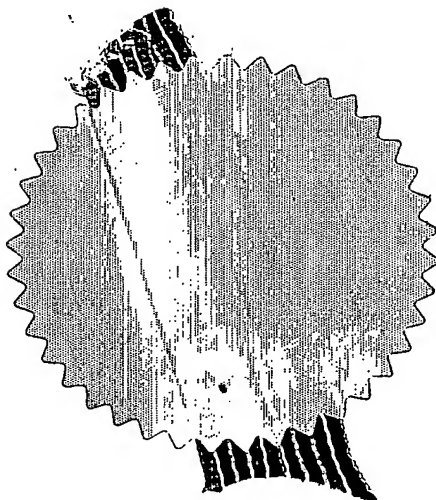
PRETORIA

in die Republiek van Suid-Afrika, hierdie  
in the Republic of South Africa, this

25th

dag van  
day of

June 2003



## PRIORITY DOCUMENT

SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH RULE 17.1(a) OR (b)

*[Signature]*  
Registrateur van Patente

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Schedule 2  
REPUBLIC OF SOUTH AFRICA  
PATENTS ACT, 1978

## APPLICATION FOR A PATENT AND ACKNOWLEDGEMENT OF RECEIPT

[Section 30(1) – Regulation 22]

REGISTRAR OF PATENTS, DESIGNS,  
TRADE MARKS AND COPYRIGHT

Official stamp: 2002 R50 \$1 1602

REGISTRAT'UR VAN PATENTE, MOEDELLE,  
HANDELSMERKE EN OUTEURSREG

The granting of a patent is hereby requested by the undermentioned applicant on the basis of the present application filed in du

(i)

Official Application No.: 2002/4368

Applicant's or agent's reference: ANDEL MARK F.M. OUTEURSREG

(ii)

71 Full name(s) of applicant(s): AANSOEKERS VERVANG  
VERMONT PEREGRIN JOINT  
APPLICANT'S SUBSTITUTED  
CSIR 05.12.02

(iii)

Address(es) of applicant(s): 33 GOLF STREET  
WATERKLOOF, PRETORIA  
GAUTENG, REPUBLIC OF SOUTH AFRICA

(iv)

54 Title of invention ITEM OF FOOTWEAR

(v)

The applicant claims priority as set out on the accompanying form P2. The earliest priority claimed is:  
Country: No: Date:

(vi)

This application is for a patent of addition to Patent Application No. 21 01

(vii)

This application is a fresh application in terms of section 37 21 02

(viii)

This application is accompanied by:

- ☒ A single copy of a provisional or two copies of a complete specification of 5 pages.
- ☒ Drawings of 1 sheets.
- ☐ Publication particulars and abstract (form P8 in duplicate).
- ☐ A copy of Figure \_\_\_\_\_ of the drawings (if any) for the abstract.
- ☐ An assignment of the invention.
- ☐ Certified priority documents (state number).
- ☐ Translation of the priority documents.
- ☐ An assignment of the priority rights
- ☐ A copy of Form P2 and the specification of S.A. Patent application No.
- ☒ Form P2 in duplicate
- ☐ A declaration and power of attorney on Form P3.
- ☐ Request for antedating on Form P4.
- ☐ Request for classification Form P9
- ☐ Request for delay of acceptance Form P4
- ☐ Extra copy of informal drawings (complete only)

21 01

74 Address for service: Rooth & Wessels Inc, Church Square, Pretoria Adams & Helms

Dated this 31st day of MAY 2002

Applicant's Patent Attorney

The duplicate will be returned to the applicant's address for service as proof  
of lodging but is not valid unless endorsed with official stamp.

REGISTRAR OF PATENTS, DESIGNS,  
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Official date stamp: 2002 -05- 31

REGISTRATEUR VAN PATENTE, MOEDELLE,  
HANDELSMERKE EN OUTEURSREG

In one form of the invention, the container means is generally wedge-shaped, defining a thick edge and a thin edge, and is orientated, with reference to the foot receiving portion, such that the thick edge is located near a heel area of the foot receiving portion and the thin edge is located near a toe area of the foot receiving portion.

The container means may alternatively be orientated, with reference to the foot receiving portion, such that the thick edge is located near one transverse side of the foot receiving portion and the thin edge near the opposite transverse side of the foot receiving portion.

With the above arrangement, an explosive force is directed, at least partially, towards the thick edge of the wedge-shaped container means. This means that the direction of the explosive force can at least partially be controlled and caused to be directed away from the wearer of the item of footwear according to the invention.

The invention preferably extends to an item of footwear which includes a foot receiving portion and a container means which contains an energy absorbing substance. The energy absorbing substance may be in the form of a liquid or a gel.

Preferably, the energy absorbing substance is in the form of water, methanol and/or any other substance in liquid or gel form which is capable of reducing the temperature of explosive gasses through evaporation.

One embodiment of this invention will now be described in more detail with reference to the accompanying drawing, which is a schematic representation of an item of footwear according to the invention.

In the drawing, an item of footwear 10 is shown to include a foot receiving portion 12, which may be similar to a conventional shoe upper. In this arrangement, the foot receiving portion 12 is manufactured of a strong, flexible sheet material such as Kevlar.

The item of footwear 10 further includes a wedge-shaped container means 14 for receiving and containing an energy absorbent substance. In this embodiment, the container means is in the form of a flexible, generally wedge-shaped vessel 14 having a thick edge 14.2 and a thin edge 14.4. The vessel 14 contains a liquid, energy absorbent material, in this instance water 16.

The container means 14 is orientated such that the thick edge 14.2 is located near a heel portion 12.2 of the foot receiving portion 14 and the thin edge 14.4 near a toe portion 12.4 of the foot receiving portion 14.

Thus, the area below a wearer's foot (not shown) is protected, in use, by the water containing vessel 14 in a manner as is described hereunder.

The effect of the water 16 in the vessel 14 is to absorb energy out of an explosion 26 of a landmine 28, which is shown in the drawing to be buried beneath the surface 30 of the ground. Specifically, the water 16 absorbs the explosive energy during evaporation of the water. It will be appreciated that energy is required during an evaporation process. Thus, the water evaporation process has the effect of reducing the temperature of the explosive gases. By reducing the temperature of the explosive gases, the overall pressure of these gases are commensurately reduced. This in turn reduces explosive damage and/or injury because it is the extremely high gas pressures in close proximity of the explosion which is the cause of most of such damage and/or injury.

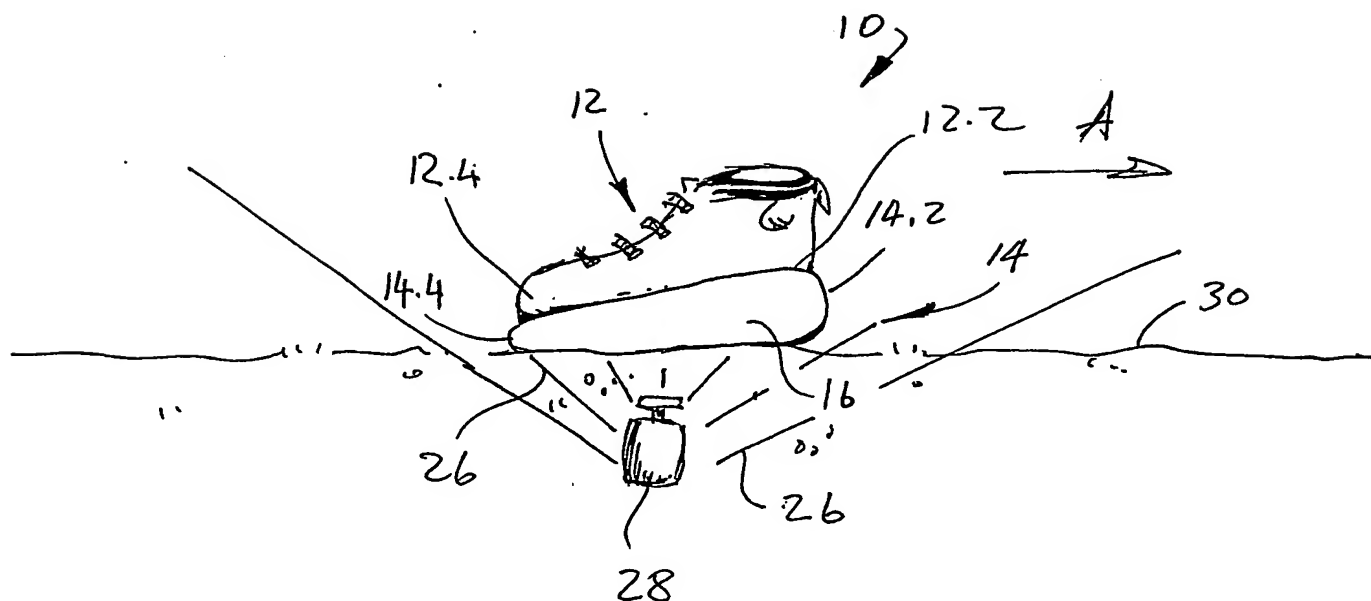
The wedge shape of the container means 14 has the further effect of directing or re-directing a substantial portion of the blast force towards the thick edge 14.2, i.e. in direction A, away from the wearer.

It will be appreciated that many variations or modifications of the invention are possible without departing from the spirit of the disclosure.

DATED AT PRETORIA THIS 31<sup>st</sup> DAY OF MAY 2002.



PATENT ATTORNEY FOR THE APPLICANT



*[Signature]*  
PATENT ATTORNEY  
FOR THE  
APPLICANT